ODP-81-494
20 April 1981

MEMORANDUM FOR: Chief, Information Systems Security Group, OS

STAT FROM   : [   ]
                     Security Officer, ODP

SUBJECT   : Access to TADS Computer System by
                 Air Force Personnel

1. The attached memorandum requests the Office of Security
to grant a waiver from Headquarters Regulations [   ] to permit
Foreign Technology Division (FTD), USAF, personnel to access the
Telemetry Analysis and Design System (TADS) computer. This
system contains [   ] information.

2. The FTD personnel, not identified at this time, probably
do not have a CIA Top Secret Staff-type clearance although they
may have an Air Force Top Secret as well as SCI approvals.

3. The circumstances described in the attachment do not
preclude any security risk. I suggest that the Office of
Security disapprove this request for a waiver. The Air Force
personnel would qualify for access to Agency computer systems if
they are processed for and granted an Agency Staff-type
clearance. The time ramaining until the training course begins
is short and it is questionable that clearance action could be
completed in time.

4. Please advise me of the position of the Office of
Security in this matter.

Attachment: a/s

STAT

STAT

STAT

14 April 1981

STAT   MEMORANDUM FOR:

Security Officer
Office of Data Processing

STAT   Through:

Chief B Division
Applications

STAT   From:

SUBJECT: Request Approval for Foreign Technology Division
(FTD), USAF, Personnel to Participate in TADS
Programmers Course.

REFERENCE: Programmers Training Course Outline (attached)

1. It is requested that the Office of Security grant approval to FTD
programmers to use the TADS computers for the purpose of performing
exercises during a programmers course. The FTD programmers will be
closely monitored and supervised.

2. The circumstances are as follows:

o On May 11, 1981, TRW contractors will be teaching a TADS
applications programmers course here at headquarters. FTD
has expressed a desire to send one or two of their personnel
to the course. The FTD personnel will be cleared SI/TK but
do not have a CIA clearance.

o As indicated in referent, the course will consists of morning
lectures and afternoon laboratory sessions on TADS. All
course materials and laboratory sessions will be unclassified.

o During the laboratory sessions, students will be required to
log onto TADS and perform various programming exercises.
These laboratory exercises will be actively tutored by cleared
TRW instructors under my monitoring and supervision.

3. I believe the above circumstances preclude any security risk;
however, an invitation to FTD to send programmers will not be made
without the approval of the Office of Security. Your concurrence and
approval will be greatly appreciated.   STAT

TADS COTR

TADS Application Programmers Training Course

Objective and Course Outline

Prepared by

STAT

TADS APPLICATION PROGRAMMERS TRAINING COURSE

Objective

The objective of the Applications Programming Course is:

1. to enable the student to comprehend the various data structures and their inter-relationship in TADS.

2. to provide the student with the capability of interfacing his FORTRAN program with the TADS system.

3. to enable the student to use and understand the task service routines available in TADS.

The pre-requisites for this course is the ability to write FORTRAN programs and the TADS USER Training Course.

To accomplish the above objective the following topics, as presented in the course outline, will be covered.

(1)

```
.--------.
!        !
! DAY 1 !
!        !
.--------.
```

TIME: 0900-11:45

LECTURE

1. Introduction to course - a brief general overview of the course and the course objective.

2. TADS System Overview

3. TADS Software Architecture

4. S-FORTRAN - a discussion of the structured FORTRAN constructs which are to be used in TADS applications programming

5. Command Definition Language (CDL) - the student will learn how to define his own commands in TADS. Included will be command definition language syntax, the usage of subcommands and sub-subcommands, and the incorporation of the command syntax in the user invironment.

6. Reading of Command Arguments and Keywords - the student will learn how to read his command arguments and keywords.

TIME: 1 1/2 HOURS

LABORATORY

The student will modify existing CDL and verify that his new command syntax performs properly; create CDL for new commands and check their validity; and write a program to read command arguments and keywords and print them on the DELTA DATA terminal.

(2)

```
!---------!
!         !
!  DAY 2  !
!         !
!---------!
```

TIME: 0900-11:45

LECTURE

1. Point data file data structures - The student will learn how data in point data files is structured and the format of the data when read into his task. He will also learn how to control the transfer of data between his task area and the data base.

2. COMMON variables - The student will learn how variables in COMMON are defined in TADS. He will learn how to use COMMON variables in his FORTRAN program.

TIME: 1 1/2 HOURS

LABORATORY

1. Compile a program with COMMON variables and note the FORTRAN output.

2. Use supplied program to read data into arrays Change controlling parameters (i.e., dope vector) and note effect on data arrays.

(3)

```
.----------.
!          !
!  DAY 3   !
!          !
.----------.
```

TIME: 0900-11:45

LECTURE

Point Data File Access - The student will learn how to
pre-open, open, access, read from, write to, position,
close and save point data files.

TIME: 1 1/2 HOURS

LABORATORY

Write a program to open a file, read data manipulate data
by adding a constant and/or taking the record average for
a multi-point data file, and writing the result to an
output data file

(4)

```
.--------.
!        !
! DAY 4  !
!        !
.--------.
```

TIME: 0900-11:45

LECTURE

1. Graphics Data Structures - The student will learn the
   purpose of and contents of graphics data structures
   including: display tables, window tables, plot lists,
   trace tables, plot buffers, buffer control blocks, and
   element control blocks.   The relationship among these
   data structures will be examined.

2. Graphics Data Structure Access - The student will
   learn how to access the above data structures in order
   to read from or write to the data structures.

TIME: 1 1/2 HOURS

LABORATORY

Perform several SPLOTs, access data structures and examine
contents.

(5)

```
!--------!
!        !
! DAY 5  !
!        !
!--------!
```

TIME: 0900-11:45

LECTURE

1. Graphics Construction - The student will learn how to create a plot from within his FORTRAN task.

2. Graphics Element Manipultion - The student will learn how to create, delete, add, manipulate, and transmit graphics elements.

TIME: 1 1/2 HOURS

LABORATORY

1. Create a program to plot a point data file.

2. Add elements to the plot and then delete them.

(6)

```
!--------[
!        !
!  DAY 6 !
!        !
!--------[
```

TIME: 0900-11:45

LECTURE

1. Interactive Graphics - The student will learn how to have his FORTRAN task interface with the PDP Graphics Station Controller. This will include the study of PDP communication formats, interactive software services, and measurement services.

2. Graphics Control, Edit and Task Modules - A genral overview of existing graphics task modules will be presented.

TIME: 1 1/2 HOURS

LABORATORY

1. Add SELECTP and READC processing to the Day 5 laboratory.

2. Write messages on the VG display.

(7)

```
!---------!
!         !
!  DAY 7  !
!         !
!---------!
```

TIME: 0900-11:45

LECTURE

1. Transparent Graphics - The capabilities, initialization and usage of the transparent graphics package will be presented.

2. List Processing Capability - The student will learn how to open, close, read from, and write to lists. The capability to replace, delete, move and search for list entries will be covered. The usage of list processing in TADS will be discussed.

TIME: 1 1/2 HOURS

LABORATORY

1. Exercise using transparent graphics software.

2. List processing exercise.

(8)

```
!--------[
!        !
! DAY 8  !
!        !
!--------[
```

TIME: 0900-11:45

LECTURE

Data Item Processing - The student will learn how to manipulate data items. The capabilities and usage of data items will be emphasized. Definition, retreival, updating, and determining attributes of data items will be covered. Active file list access and function key list access will be discussed. The movement of data items and conversion of data items to different formats will also be covered.

TIME: 1 1/2 HOURS

LABORATORY

1. Access a data item in the user environment and modify it.

2. Create a data item, add it to the program from the Day 6 laboratory. Store selected points in another data item after converting it to engineering units.

(9)

```
!---------!
!         !
! DAY 9   !
!         !
!---------!
```

TIME: 0900-11:45

LECTURE

Alphanumeric Capabilities - The student will learn how to utilize the TADS alphanumeric write capability on the Delta Data free rea. Data item definitions will be reviewed. Data item conversions and accessing the alphanumerics terminal free area will be discussed.

TIME: 1 1/2 HOURS

LABORATORY

1. Write the data item created during the Day 8 lab to the alphanumerics free area.

2. Convert the data item to other units and display the converted values on the alphanumeric free area also.

(10)

```
.---------.
!         !
!  DAY 10 !
!         !
.---------.
```

TIME: 0900-11:45

LECTURE

1. Results File Access - The student will learn how to establish, open, determine attributes, read from, write to and close results file. The capabilities and usage of results file processing will be discussed.

2. Task Software Modules - A general overview of existing task modules will be presented. The student will learn how to utilize these modules in his FORTRAN task.

3. Course review.

TIME: 1 1/2 HOURS

LABORATORY

1. Results file exercise including point selection.

(11)